Entrepreneurship Knowledge and Interest Among Twelfth Grade Students at SMKN 1 Lubuk Pakam

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Abstract. This study is focused on exploring how entrepreneurial knowledge relates to the entrepreneurial interest of twelfth-grade students in the Building Model-ing and Information Design Expertise Program at SMK N1 Lubuk Pakam. As stated by Josia Sanchaya Hendrawan and Hani Sirine (2017), entrepreneurial knowledge involves an individual's ability to innovate and create new things through creative thinking and actions, which leads to the develop-ment of ideas or opportunities that can be utilized effectively. The study takes a quantitative approach with descriptive analysis. The sample includes twelfth-grade students from Lubuk Pakam, specifically from classes XII DPIB-A and XII DPIB-B. We gathered data for this research through observation, documentation, and questionnaires. The primary tool for this research was a questionnaire consisting of various questions. The analysis of the correlation coefficient revealed a significance value of 0.000, which is less than 0.05 (0.000 < 0.05), suggesting a relationship between variables X and Y. Additionally, the results from the t-test indicated that t_calculated > t_table (41.453 > 1.668), with a significance value of α (0.000 < 0.05). This confirms that there is a positive correlation between entrepreneurial knowledge (X) and entrepreneurial interest (Y) among the twelfth-grade students in the Building Modeling and Information Design expertise program.

Keyword: Entrepreneurship, Knowledge, Interest, Twelfth grade

1 Introduction

Education is a process of developing and improving human resources. Addi-tionally, individuals expect education to bring about changes in cognitive, af-fective, and psychomotor aspects. Schools serve as educational institutions, where the teaching and learning process takes place in schools, which helps students achieve educational goals and leads to changes in their behavior. Ac-cording to the 2003 National Education System Law, education is an intention-al and structured effort to create a learning environment and teaching process that motivates students to actively develop their potential. This includes foster-ing spiritual and religious strength, self-discipline, character, intelligence, moral behavior, and the skills needed for their personal growth, as well as for the benefit of society and the nation.

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According to data from the Central Statistics Agency, the Open Unemploy-ment Rate (TPT) in Indonesia as of August 2022 stood at 5.86%, equating to 8.42 million individuals, while the TPT for graduates of vocational schools (SMK) was 9.42%. Compared to the last two years, there has been a decrease, with 13.55% in 2021 and 11.13% in 2022. The second-largest group is Senior High School (SMA) graduates at 8.57%, a slight decrease from the past two years. When broken down by gender, the highest TPT is among men at 5.93%, while women have a TPT of 5.75%. According to the most recent data released by BPS on May 5, 2023, there were at least 7.99 million unemployed people in Indonesia as of February 2023, a decrease of 411 thousand compared to the same period in 2022

According to Article 15 of Law No. 20 of 2003 on the National Education System, vocational education is intended to equip students with the necessary skills for specific careers. Additionally, Government Regulation No. 19 of 2005 sets the national education standards. Vocational secondary education is a level of education that aims to enhance students' skills for specific job roles. As a result, vocational education should consistently align with the needs of business or industry. Through entrepreneurship instruction, vocational high schools aim to improve student quality and competence.

Entrepreneurship is a process in which individuals use available resources to create new opportunities, introducing the approach of Effectuation, which focuses on decision-making in uncertainty [1]. The article explains that entre-preneurship in Vocational High Schools (SMK) aims to foster an entrepreneur-ial mindset in students through hands-on learning, preparing them to tackle workforce challenges and generate employment opportunities [2]. Overall, human involvement in entrepreneurship is essential as a foundation for the economic growth of a country.

Entrepreneurship knowledge encompasses various aspects, ranging from an understanding of basic entrepreneurship concepts and business processes to the managerial and innovative skills needed to run a business. Students with a strong understanding of entrepreneurship are expected to better recognize mar-ket opportunities and be able to identify and address challenges that may arise in running a business. However, even with the integration of entrepreneurship education into the SMK curriculum, many students still show no interest in pursuing entrepreneurship after graduation. Several previous studies have demonstrated a positive correlation between entrepreneurship knowledge and entrepreneurial interest, particularly among students who receive adequate en-trepreneurship education. They are likely to develop a more favorable attitude toward entrepreneurship and are more inclined to take risks when launching a business. Entrepreneurship is not just about generating profit but also about creating added value for society and the surrounding environment. As seen on Saturday, February 24, 2024, with head of the Design Modeling and Building Information department, the learning outcome report of Class XI DPIB A and B students who are interested in business can be seen in Table 1.

Table 1. Learning outcome report of Entrepreneurship Subject for Class XI DPIB A and B Students

School year	Score	Number of students	Percentage	Qualifica-

				tion information
2023/ 2024	<75	3	4,54	Incompetent
	75-79	6	9,09	Quite competent
	80-89	26	39,39	Competent
	90-100	31	46,96	Very competent
Total		66	100	

From the table above, it can be seen that 3 students (4.54%) are not competent, 6 students (9.09%) are moderately competent, 26 students (39.39%) are competent, and 31 students (46.96%) are highly competent. Based on the data on the students' learning achievements in entrepreneurship, the results for the Design Modeling and Building Information program at SMK N1 Lubuk Pakam are optimal. We can con-clude that the students' understanding of entrepreneurship has reached an optimal level.

Therefore, the entrepreneurship knowledge that students possess is not just a component of the curriculum but an investment in developing individuals who are prepared to confront the scarcity of job opportunities and capable of offering solu-tions to these challenges. Entrepreneurship enhances the quality of vocational high school graduates, preparing them to become skilled, professional, and self-reliant entrepreneurs. This aligns with the principle of vocational education, which empha-sizes "learning through practical experience" in the curriculum, which is designed to help individuals with potential become entrepreneurs.

Based on interviews and observations on Saturday, February 24, 2024, (see Table 2) shows the number of students who graduated (alumni tracer study results) from the Design Modeling and Building Information program at SMK N1 Lubuk Pakam in 2019, 2020, 2021, 2022, and 2023. From table 2, we can see that the number of graduates who become entrepreneurs is still less than 10%. This entrepreneurial rate does not align with the statement from the Global Entrepreneurship Monitor (GEM), which asserts that the stability and development of a country are based on the num-ber of entrepreneurs in that country, with at least 10% to 15% of the adult population engaged in entrepreneurship. The data shows that many graduates are not interested in becoming entrepreneurs, leading them to still rely on industries for employment. Therefore, it is important to expand students' understanding of entrepreneurship, so they no longer depend on industries or companies, but instead can independently run their own businesses and potentially create new job opportunities using the skills they already possess. Thus, entrepreneurship serves as a way for students to learn to become professionals and master their abilities by working directly with people in the industry. This experience, creativity, and the potential they possess in entrepreneurship knowledge will encourage them to choose entrepreneurship as a career path.

Table 2. Alumni tracer study results

School year	**2019**		**2020**		**2021**		**2022**		**2023**	
Job information	**Num-ber of**	**%**	**Num-ber of**	**%**	**Num-ber of**	**%**	**Num-ber of**	**%**	**Num-ber of**	**%**

	re-spond-ents		re-spond-ents		re-spond-ents		re-spond-ents		re-spond-ents	
According to expertise program	8	12,9	7	10,7	4	6,6	4	6,2	3	4,3
Work not accordance with expertise program	27	43,5	34	52,3	25	37,9	11	16,9	15	21,7
PNS/TNI/POLRI	3	4,8	2	3	2	3,3	2	3,7	1	1,4
Businessman	5	8	6	9,23	4	6,1	4	6,2	3	4,6
Continue to college according to expertise program	6	9,61	3	4,6	5	7,6	5	7,7	9	13,1
Continue to college not according to expertise program	9	14,5	9	13,8	8	12,1	8	13,8	10	14,5
Unemployed	2	3,2	3	4,6	17	25,7	21	32,8	28	40,6
Not recorded	2	3,2	1	1,5	0	0	0	0	0	0
Total Alumni	62 persons		65 persons		66 persons		65 persons		59 persons	

Therefore, students who already have entrepreneurship knowledge can deepen their understanding of the aspects of entrepreneurship, thus fostering an entrepre-neurial spirit and interest in becoming successful entrepreneurs after graduating from vocational school (SMK). But it's still not clear how strong the link is between students in the Design Modeling and Building Information specialization program at SMK N1 Lubuk Pakam's knowledge of entrepreneurship and their desire to become entrepreneurs. Therefore, this result obtains to identify the relation between entre-preneurship knowledge and interest among XII grade students at SMKN 1 Lubuk Pakam.

2 Literature Review

2.1 Entrepreneurship Knowledge

Explains that entrepreneurship knowledge includes all the different kinds of information that are processed and grown in the cognitive domain, such as memory and knowing how to run a business, which makes people brave enough to take logical risks [3]. Describe entrepreneurship knowledge as the ability to come up with new ideas by thinking creatively and innovative actions, which can create opportunities that can be effectively utilized [4].

Argues that an entrepreneur will succeed if they possess both the will and the ability, which are closely connected to knowledge and experience [5]. Abil-ity refers to

strong determination and high motivation, which are essential traits for an entrepreneur. If an entrepreneur has the will but lacks the neces-sary skills, their business may fail. Skills are vital for managing and calculat-ing risks. Michael Harris also highlights the importance of knowledge for an entrepreneur, stating that successful entrepreneurs typically have competence, which includes knowledge, skills, personal qualities, attitudes, motivation, val-ues, and behaviors necessary to perform their tasks effectively [6].

2.2 Interest

According to Guilford, "Interest is the general A person's natural inclination to be drawn to a specific group of things [7].” Meanwhile, define interest as a sense of preference, attraction, attention, focus, perseverance, effort, knowledge, skills, motivation, behavioral regulation, and the result of an indi-vidual's interaction with specific content or activities [8]. Interest is also de-fined as an unintentional focus of attention, born with strong will, and depend-ent on talent and the Interest can be understood as a natural feeling of attrac-tion, liking, or attachment to something or an activity, without needing exter-nal encouragement [9]. It reflects a person's inner connection with a particular subject or activity, and the stronger that connection, the greater the interest at-traction, liking, and attachment to a particular thing or activity, pursued with full willingness.

Interest refers to a natural sense of liking and connection to something, or an activity, without external encouragement. It is fundamentally the recognition of a bond between oneself and something external. The stronger or more inti-mate the connection, the greater the level of interest. A student's preference for one thing over another can reflect their interest. Cultivating interest involves helping students understand how the material they are learning relates to their own personal experiences and identities.

2.3 Entrepreneurship

Entrepreneurship can be concluded as someone who possesses the ability, attitude, and mindset to take risks, recognize opportunities, has a future-oriented vision, independence, and a goal to grow sustainably over a long peri-od, by creating a product with high value, significant benefits, and achieving greater profit. Entrepreneurship knowledge includes a full understanding of different types of information that are processed and developed in the cogni-tive domain. This includes memory and understanding how to run a business, which gives people the confidence to take logical and reasonable risks in busi-ness management. Assert that thorough entrepreneurship education in voca-tional high schools (SMK) can enhance students' understanding of business and management principles [10]. This research shows that students who receive quality entrepreneurship education tend to have a higher interest in starting their own businesses. This is consistent with the theory that deep knowledge enhances students' confidence in entrepreneurship. Highlight the importance of practical experience in boosting entrepreneurial interest [11]. They found that students who engage

in internship programs or entrepreneurship projects out-side the classroom are more motivated to become entrepreneurs.

2.4 Vocational High School

The National Education System Law states that Vocational High Schools (SMK) are educational institutions at the secondary level designed to prepare students for specific careers. SMK offers programs that enable graduates to work professionally, both in the national and international arenas. Define voca-tional education as education focused on preparing individuals for work or earning a livelihood [12]. Furthermore, it clarifies that SMK, a secondary edu-cation level, aims to produce skilled, capable, and independent graduates who are crucial for the nation [13]. Notes that Vocational High Schools (SMK) are one type of secondary school expected to address long-term educational needs [14].

3 Reserch Methodology

The research uses a quantitative approach with descriptive analysis. This means that the data are numbered and analyzed to find patterns or relation-ships. It then checks to see if there is a relationship between two variables and how strong that relationship is. We conduct the research using an ex post facto approach, which means we do it after an event has already occurred. Ex post facto research tries to find the reasons why behaviors, symptoms, or other things might change after an event, behavior, or set of factors have already caused changes in the independent variable.

A research instrument is a tool employed to assess natural or social phe-nomena that are being observed. Explains that data collection techniques in-volve actions taken by researchers to analyze and explore using tools that are suitable for the research issue [15]. The methods used to collect data in this study include:

3.1 Observation

During the data collection process, the researcher personally met with the head of the Design Modeling and Building Information department head of the Design Modeling and Building Information department at SMK N1 Lubuk Pakam, Mrs. Pamoria Sondang, S.Pd. The researcher conducted an interview related to the re-search topic and obtained data on the A total of 66 students completed the entre-preneurship subject in the odd semester of the 2024/2025 academic year. consist-ing of 33 students from class A and 33 from class B.

3.2 Questionnaire

The questionnaire consists of There are two types of questions: open-ended and closed-ended. Open-ended questions require respondents to provide detailed writ-ten answers, whereas closed-ended questions ask respondents to choose from a set of

predetermined options.ask respondents to provide detailed written responses on a specific topic. On the other hand, closed-ended questions require short answers or ask respondents to select one option from a set of provided alternatives. Any question in the questionnaire that expects responses in the form of nominal, ordi-nal, interval, or ratio data is classified as a closed-ended question [16]. The ques-tionnaire used in this study is of the closed-ended type.

4 Results And Conclusion

Data on entrepreneurship knowledge was obtained through the report card grades of students in the entrepreneurship subject, which was conducted over one semester in Class XI during the 2023/2024 academic year. The report card grades are based on student discipline, attendance, appearance, understanding, skills, completion of homework, and midterm and final exams. Data on entrepreneurial interest was ob-tained from the scores of the questionnaire given to the respond-ents. The scores in the questionnaire were based on the responses from each par-ticipant. Respondents had 4 possible answer choices for each question. The The available response options were: Strongly Agree, Agree, Disagree, and Strongly Disagree. Each of these choices corresponded to a different score these four choices corresponded to a different score for the responses, "Strongly Agree" (SA) was given a score of 4, "Agree" (A) re-ceived a score of 3, "Disagree" (D) was assigned a score of 2, and "Strongly Disa-gree" (SD) was scored 1.

4.1 Normality Test

The results of the normality test, using the Kolmogorov-Smirnov test and the residual values from the regression equation, are shown in Table 3.

Table 3. Normality test results using the kolmogorov-smirnov test

		Unstandardized Residual
N		66
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.13954788
Most Extreme Differences	Absolute	.070
	Positive	.070
	Negative	-.063
Test Statistic		.070
Asymp. Sig. (2-tailed)		.200[c,d]

According to the table above, the result of the normality test shows a signifi-cance value of 0.200, which is higher than 0.05, meaning that the data is normally distribut-ed. residual values are normally distributed. This confirms that the nor-mality as-sumption for the residuals in the statistical analysis has been satisfied. This implies that the regression model effectively represents the connection be-tween the inde-pendent and dependent variables.

4.2 HomogeneityTest

The calculation results of the homogeneity test are shown in Table 4

Table 4. Homogeneity test results

		Levene Statistic	df1	df2	Sig.
Entrepreneural knowledge	Based on Mean	.596	12	49	.835
	Based on Median	.525	12	49	.888
	Based on Median and with adjust-ed df	.525	12	31.525	.882
	Based on trimmed mean	.567	12	49	.858

Looking at the table 4, we can see that the significance value is 0.858, which is higher than 0.05. This indicates that the entrepreneurial interest derived from the questionnaire responses has consistent variance or is homogeneous.

4.3 Correlation Coefficient Test

The calculation results for the correlation coefficient are presented in Table 5.

Table 5. Correlation Coefficient Test Results

		Entrepreneural know-ledge	Interest in entre-prenuership
Entrepreneural knowledge	Pearson Correla-tion	1	.956**
	Sig. (2-tailed)		.000
	N	66	66
Interest in entrepre-neur-ship	Pearson Correla-tion	.956**	1
	Sig. (2-tailed)	.000	

N	66	66

The correlation coefficient analysis in this study shows the significance value of 0.000, which is smaller than 0.05 (0.000 < 0.05), shows that there is a correlation between the variables X and Y. Additionally, the Pearson Correlation value of 0.956 suggests a perfect positive correlation, as values between 0.81 and 1.00 are considered to indicate a strong correlation. Partial Test (t-test) You can find the results of the partial (t-test) in Table 6 below.

Table 6. t-test Calculation Results

No	Variabel			Sig
1.	Entrepreneural knowledge X, Interest in entrepreneurship Y	41,453	1,668	0,000

According to the table 6, the value of t-calculated for the entrepreneurial interest variable (X) is 41.453, The significance value is 0.000, and the t-table value is, based on a degree of freedom (df) of 64 and a significance level of $\alpha = 0.05$, is 1.668. Thus, the result shows that t-calculated is greater than t-table (41.453 > 1.668), and the significance value (α) is less than 0.05 (0.000 < 0.05), indicating a positive relation-ship.

5 Conclusion

There is a strong link between students in the Design Modeling and Building Information program at SMKN 1 Lubuk Pakam who are in the XII grade and interested in starting their own business. This was found by research and data analysis. The study's hypothesis testing led to this conclusion.

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